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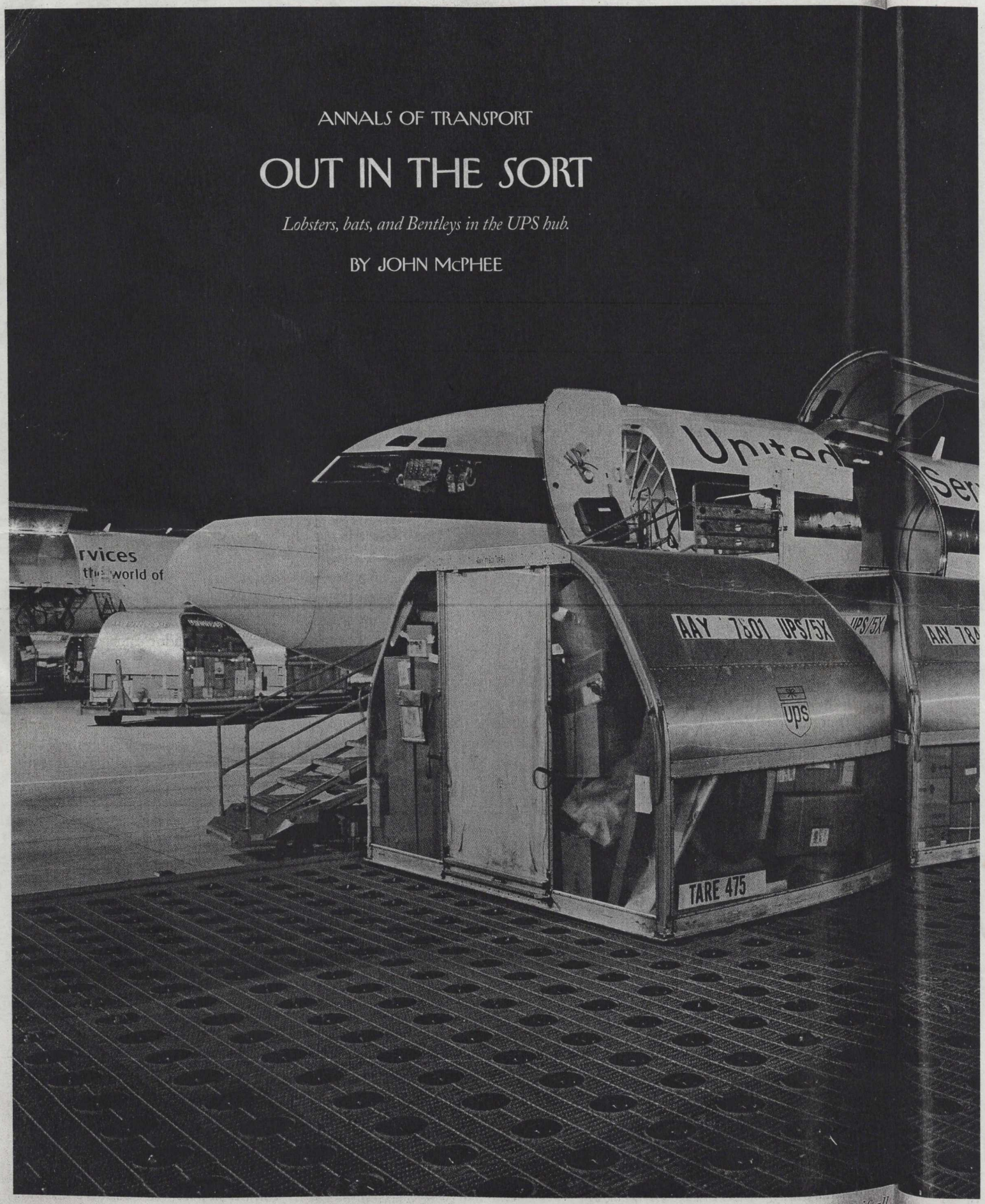
ANNALS OF TRANSPORT

OUT IN THE SORT

Lobsters, bats, and Bentleys in the UPS hub.

BY JOHN McPHEE



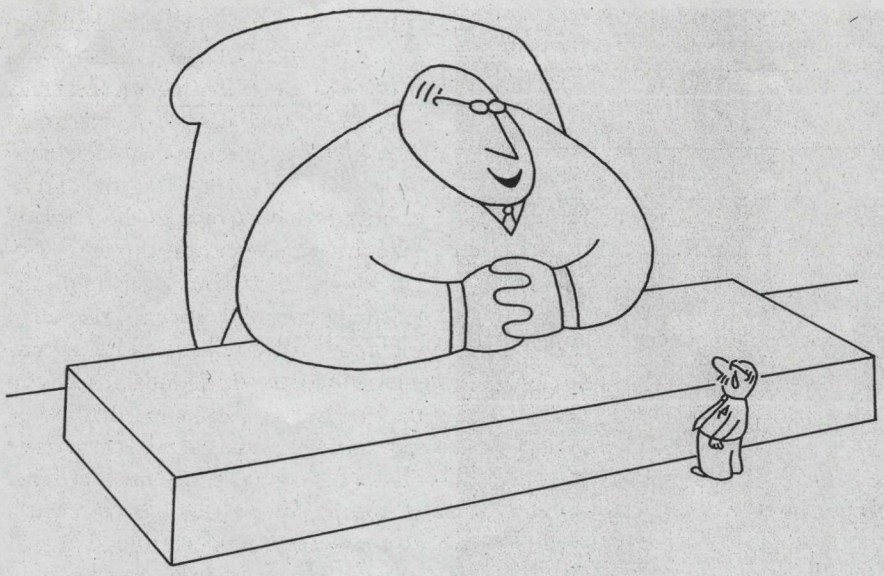
Some five thousand employees—including college students and pilots—come to work in the main UPS hub every night, but, if all goes well, few o

but, if all goes well, few of them will ever touch a package. Photograph by Robert Polidori.

In an all but windowless building beside the open ocean in Arichat, Nova Scotia, a million lobsters are generally in residence, each in a private apartment where temperatures are maintained just above the freeze point. In a great high-ceilinged room known as the Dryland Pound, the lobster apartments are in very tall stacks, thirty-four levels high, divided by canyonlike streets. The size of the individual dwellings varies according to the size of the inhabitants; and there in the cold dark, alone, they use almost no energy and are not able to chew off their neighbors' antennae or twist off their neighbors' claws, as lobsters will do in a more gregarious setting. The cold water comes down from above and, in a patented way, circulates through the apartments as if they were a series of descending Moorish pools. Beguiled into thinking it is always winter, the lobsters remain hard, do not molt when summer comes, and may repose in Arichat for half a year before departing for Kentucky.

They belong to a company called Clearwater Seafoods, which collects them from all over the Maritime Provinces, including Nova Scotia's Cape Breton County, where Arichat is, on an island called Madame. Clearwater has a number of offshore licenses, its deep-sea trawlers fifty to two hundred miles out, tending mile-long lines of traps, and enhancing Clearwater's catch of lobsters that weigh three to fifteen pounds. A twenty-plus-pounder is rare but not unknown.

Sixty people work in the Arichat plant, sometimes around the clock. The manager is a big rugged guy named David George, who was wearing an N.Y.P.D. T-shirt when I met him and who summed up his operation, saying, "We go through a shitload of lobsters in a two-month period." From Clearwater's headquarters in Bedford, beside Halifax, I had driven up to Arichat with Mark Johnson, manager of Clearwater Lobster Merchants, New Covent Garden Market, Battersea; Dominique Bael, of Clearwater's La Homarderie, Quai des Usines, Brussels; and Marc Keats, the company's chief of European lobster sales. Lobsters were arriving at the rate of a hundred thousand a day, and each acceptable newcomer—its antennae waving, its carapace glistening—was given discrete space on a conveyor belt



"O.K., O.K., Wilkins, on behalf of all alpha males I apologize."

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designed to advance its journey toward someone's distant mouth. The sensitized, computerized belt was, among other things, weighing the lobsters and assigning each by weight to one of sixteen grades. Lobsters graded "select" weigh between two and two and a half pounds. Chix all weigh just over or under a pound and are graded as large chix, medium chix, and small chix. A large quarter is a pound-and-a-quarter lobster that is an ounce or two on the heavy side. A small quarter is a light one. A large half weighs a little over 1.6 pounds. As the lobsters fly along the conveyor belt, computer-brained paddles reach out and sweep them variously left or right off the belt and into chutes that lead to large trays partitioned to accommodate lobsters of their exact heft. Biologists hover around the belt. The lobsters have a long way to live.

Clearwater once shipped lobsters to a Nobel Prize dinner. The company's delivered price was cheaper than the price of Swedish lobsters. Now and again, a lobster with claws the size of bed pillows goes to Japan to be featured in a display, but what the Japanese want in steady volume are chix. The world at large wants chix and quarters. Americans, almost alone, want the big ones. Clearwater lobsters go weekly to Guam. They go to Tel Aviv, Bangkok, Osaka, Los Angeles, Sioux Falls, Phoenix, Denver, Missoula, Little Rock, Brooklyn, and Boston. Lobsters are to Christmas dinners in France what turkeys are in America. On the eve of Christmas Eve, planes heading east for Paris have almost infinitely more lobsters in them than human beings. In annual consumption of lobsters, France is No. 1 in Europe. Clearwater has two customers in France, and is not looking hard for a third. An impression seems to be that the French are cheap and they want cheap lobsters. Moreover, when invoices go out it's a long time to the first euro. You will not find an ad for Clearwater in *Cuisine et Vins de France.* Christmas is also lobster time in much of the rest of Europe, and even in Asia. Lobsters are routed from the Dryland Pound to Louisville to Anchorage to Seoul. They go to Mexico, Turkey, Germany, Italy, Switzerland, and Spain. By the truckload, they go to Maine!

Four hundred thousand pounds a year pass through Clearwater's reservoir in New Covent Garden, Mark Johnson remarked, while we watched three-pounders and four-pounders scrolling by on their way to Las Vegas. In England, he mainly sells large quarters. Marks & Spencer is his biggest customer. Second is British Airways. On a *Restaurant Magazine* list of the fifty finest restaurants in the world, thirteen were in England, and six of those were customers of Clearwater lobsters.

The rationale of the Dryland Pound is to make hard, healthy lobsters available to the market year round, overcoming the impediments of Clearwater's short fishing seasons and nature's cyclical shrinking of lobsters' internal meat. The Clearwater harvest takes place for a couple of months in springtime and again in November-December. The harvest in Maine takes place all year. When a lobster becomes so fully meated that it begins to overcrowd its carapace, it molts—generally in summer. First, its meat shrinks radically and is softened by absorbed water. The shrivelled and softened flesh is able to come out of the shell. In Halifax, these rudiments were reviewed for us by Sharon Cameron, a biologist on the faculty of Clearwater's Lobster University, whose students were company personnel and customers on visits to headquarters from around the world. Recovery—the regrowth of flesh and the hardening of the new and larger shell—requires two months. As lobsters age and grow—five to seven years for each pound—years can go by between molts. The premium, tenderest lobsters are within a few months of their recovery after molting. Clearwater harvests only hard lobsters. Since there is no way to tell if a hard lobster molted three months ago or three years ago, chefs undercook the big ones, because they are tenderest when raw.

Professor Cameron slipped a needle into the belly of a lobster, drew blood, and squeezed it into a refractometer. The more blood protein, the longer you can store the lobster, she said. Clearwater's harvests take place when blood protein is highest. "The U.S. fishes mostly in summer, when blood protein is lowest. Convenience is the reason. They're not doing it for lobster quality. They're doing it for their own convenience."

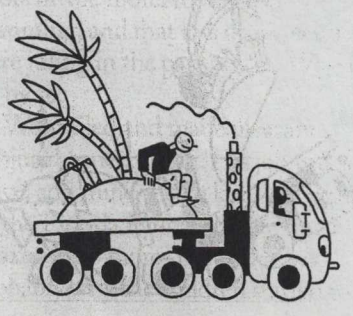
Lobsters in the Arichat Dryland Pound lose all inclination to molt. They are like orange juice at Tropicana, frozen in massive blocks so that Tropicana can cover the whole of the calendar year although the Florida harvest runs for only seven months. To make sure that there is no summer in the Dryland Pound, the ocean water descending through the apartments is maintained at thirty-four to forty-one degrees Fahrenheit, and in one way or another, in and out of brine, Clearwater keeps its lobsters about that

cold until a UPS package car drops them at somebody's door.

Long-distance travel will stress a lobster and affect it physically. Among other things, it loses weight and accumulates ammonia. This can happen on a smooth highway, let alone in giddy turbulence at thirty thousand feet. If a lobster succumbs, the ammonia will detonate as a shaped olfactory charge. The next time your quarterback is sacked unconscious, put a dead lobster under his nose and he'll stand up ready for action. If lobsters are going to travel the globe, they need rest at strategic places en route—they need to "float," in the language of the trade, for recuperative periods. Accordingly, when Clearwater became aware that UPS was building a new air superhub in Louisville, Clearwater decided to go there, establish a rest-and-rehabilitation reservoir close to the airport, and cause Louisville to become the flying-lobster capital of the United States.

Every five or six days, an eighteen-wheel reefer with a red cab and a silver-white box loads up at Arichat, pulls away dripping, carefully circumscribes Isle Madame on roads scarcely wider than it is, passes white lobster boats in arms of the sea framed in black spruce over massive shelves of bedrock, and picks up speed for Kentucky. It goes through St. John, and on down New Brunswick 1 to Calais, Maine, where United States Customs X-rays the truck's entire box, which can be carrying as many as thirty thousand lobsters. Dropping six gears, the truck climbs Day Hill on Maine 9, locally known as "the Airline," crossing the ridges of Washington County. The Day Hill gradient in winter weather sometimes causes tractor-trailers to slide backward while their powered wheels go on spinning forward. At Bangor, the lobsters connect with I-95 and follow it down into New Hampshire and on nearly to Boston, swinging southwest on I-495 and—to save ten minutes—taking I-290 through Worcester. Steve Price is one of the drivers. Dennis Oickle is often paired with him. Steve says they "eat on the fly." He brings food from home, keeps it in the truck's mini-fridge, and heats it in the microwave. Steve—brush-cut hair, trim avuncular beard—is the father of three. He says that Dennis, "being young, eats junk." Stops are so few that Dennis, for the most part, has to bring the junk with him. They both live in Sackville, Nova Scotia. At work, they don't see a lot of each other. While one drives, the other sleeps—four hours on, four off. In April, 2004, they set the Clearwater record for the run—Arichat to Louisville in twenty-seven and a half hours. Most trips take at least twenty-nine hours, some as many as thirty-two. They cross the Hudson at Newburgh, the Delaware at Port Jervis, the Susquehanna on I-80 at Mifflinville, Pennsylvania. At a Bestway truck stop not far from State College, they spend six hundred dollars and upward for fuel, but they wait to take a shower on the deadhead leg home. Over and under their crates of lobsters in the box are layers of corn ice as much as a foot thick. On the interstates, the dripping water leaves a trail behind the truck. Since the sole decoration on the box is the company's simple blue-and-red logo—"CLEARWATER"—other drivers will now and again call on the CB radio and, typically, tell them, "Hey, you're losing your load." On the interstates of Ohio, the lobsters have to slow down to a crawl—fifty-five m.p.h., a strict state law—to Akron, to Columbus, to Cincinnati, with ammonia levels rising. The truck has a global positioning system. Ross Wheeler, Clearwater's truck manager in Halifax, tracks the journey on his computer, as do Mike Middleton, Tim Wulkopf, David Brockman, and Dave Joy, in Louisville. From time to time, they all e-mail the truck. Clearwater is a collection of mainly young and exuberant people, so informal that their worldwide directory is alphabetized by first names. There are two hundred people in the Lobster Division.

The truck comes into Louisville on I-264, gets off near the airport at the Poplar Level exit, goes south about a mile, and turns onto Produce Road—8:05 P.M. this time, a spring evening, twenty-nine hours and forty minutes from Arichat. Dennis is asleep, unable



to defend himself about the junk food. A forklift takes two hours to unload some ten thousand pounds of lobsters—a light load, variously in crates and in Dryland system trays. A "truck map"—the sort of cargo chart that would be familiar to the first mate of a merchant ship—helps blend the arrivals into the reservoir, where strings of crates are suspended on ropes, and more than fifty thousand pounds of lobsters can chill out at two degrees Celsius in brine made with Kentucky branch water and sea salt in bags from Baltimore. The new arrivals soon appear on the "reservoir map," from which orders in the sixteen different grades can be filled. Housed in one unit of a commercial tilt-up, the reservoir is four feet deep and close to ninety feet long. Arriving crates are randomly opened and inspected before they are immersed. En route, the lobsters have lost about three per cent of their weight. Looking for "weaks, deads, and rots," Dave Joy is not for the moment finding any. He peers down into the bottom of the crates for signs of bleeding, which takes experience, since lobster blood is clear. He examines shells for cracks. Gripping a thorax, he lifts up a lobster, wet and shining. It splays its claws like a baby bear. Now he takes hold of each claw and lifts the lobster by the arms like a human child. Its tail forms the letter C. The odds on this creature ending its travels in a Palm restaurant are extremely high. It is full of life and weighs five pounds. Long before midnight, the truck departs for Canada, loaded with empty crates. In bed in the back of the tractor, Dennis has slept through the whole of the stop in Louisville.

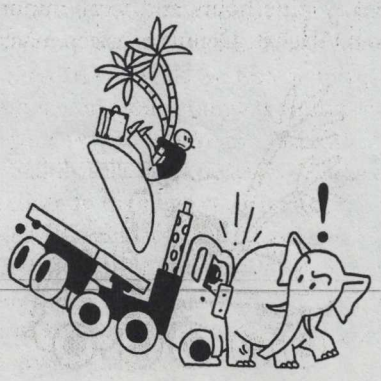
Clearwater's over-all mortality rate was once as high as twelve per cent but is now under five per cent, despite the fact that lobsters characteristically lose their energy fast. To demonstrate, Mike Middleton, Clearwater Louisville's chief of operations, holds one up horizontally. Its tail extends stiffly. Its claws spread out. It seems ready to fly. Within ten seconds, though, the tail has gone down like a bad dog's. If you pick up a lobster and the tail droops from the get-go, the lobster is probably verging on death. Lobsters that are weak and dying are sold to Asian buffets. Dead lobsters are probed with an electrode. If the tails curl up, the lobsters are frozen instantly and

sold for stock and bisque. If the tails do not curl up, the carcasses are catfish bait. Middleton says he grows "huge pumpkins" over moldering lobsters. He also takes home an occasional robust giant. After parboiling it, he splits it longitudinally from head to tail and completes the cooking on his outdoor grill.

Middleton, Wulkopf, and Brockman have learned their lobsters in Kentucky. Dave Joy, on the other hand, grew up on St. George's Bay, between Port aux Basques and Corner Brook, in Newfoundland. With Clearwater almost from its inception, in 1976, he bought Newfoundland lobsters for the company for a decade before moving to its headquarters in Nova Scotia. Later, he took two years off to get a degree from Fisher Tech, in Corner Brook. When UPS drew the lobsters to Kentucky, he was drawn, too, and intends never to leave. He is the plant manager, in charge of the rez, as everyone calls it, and supervisor of the packing. Short and compact, in a blue T-shirt and blue warmup pants with white stripes, he picks up a big lobster that is stopping over on its way to Los Angeles. Does the tail come up? How fast does it come up? "It's a quick decision by the packer," Dave says. "He's only got a few seconds to make up his mind." Claws akimbo, tail flat—sold! With subzero gel packs, the lobsters go into standard thirty-pound Styrofoam boxes logoed "CLEARWATER," "HARDSHELL FRESH," "VIVANT." Thirteen selects are about all that will fit into one of these boxes—thirteen "pieces," as whole lobsters are called. If the customer wants chix, the box will hold twenty-seven or twenty-eight pieces. Even if they are well chilled by the gel packs, lobsters can be out of water no more than forty-eight hours before mortality steeply rises. Afternoons and evenings, the clock starts ticking as they go into the Styrofoam boxes. At 10 P.M., a brown UPS "moose," a step van somewhat larger than the standard package car, backs up to the Clearwater dock. The driver is wearing brown shoes, brown socks, brown shorts, a brown polo shirt, and a brown headband—Susan Badger. On a typical Monday or Thursday evening, UPS will pick up about three thousand pounds of lobsters, but this is a Wednesday and the net load is somewhat shy of six hundred. Badger starts off for the UPS air hub, five minutes away.

She is carrying about two hundred and seventy lobsters ticketed for a spray of destinations, including the Cranberry Tree Restaurant, in Skagit County, Washington, sixty miles north of Seattle; Bosackis Boat House, on a lake in northern Wisconsin; the Ho-Chunk Casino, in Baraboo, Wisconsin; the Rainbow Casino, in Nekoosa, Wisconsin; Elden's Food Fair, in Alexandria, Minnesota; Jane's Tavern, on the Middle Loup River, in Rockville, Nebraska; a Keg restaurant in Chandler, Arizona; the Useppa Inn & Dock Company, in Bokeelia, Florida; the Ione Hotel, in the Sierran foothills of California; a private home in Put-in-Bay, Ohio, on an island in Lake Erie less than ten miles from Canada; Estiatorio Milos, a Greek restaurant at 125 West Fifty-fifth Street, Manhattan; and Mountainside Lodge, near Old Forge, New York, in the Adirondacks.

Of course, none of those are from that truckload just in from Nova Scotia. The new arrivals are beginning their required rest, but, in Tim Wulkopf's words, "the turnover is two weeks tops and out of here." Most of that truckload is gone in a few days—for example, Next Day Air to Manhattan Beach, California, left at someone's front door at nine-twenty-six in the morning; to the Horseshoe Casino, in Robinsonville, Mississippi (fourteen hours out of the rez); to an e-customer in Pasadena, Texas; to Spinnaker's Restaurant, in St. Joseph, Michigan; to a Palm in Denver; to Ruth's Chris restaurants in Metairie and Lafayette, Louisiana; to the A&B Lobster House, in Key West. Wulkopf says, "Between e-commerce and wholesale, I can't think of a state we don't ship to. Montana, Maine, West Virginia, Missouri, New Mexico, North Dakota, South Dakota, Georgia, Hawaii, Alaska. We have customers in Puerto Rico." Of Clearwater's air shipments, about seventy-five per cent go west. But Clearwater's Canadian lobsters are also flown back east from Kentucky to Connecticut and New Jersey. Online, people will order as many as fifty or sixty pieces, but mostly fewer than ten: two to New Castle, Delaware; two to Hackensack, New Jersey; two to Barre, Vermont. The lobsters go by moose to the UPS hub as living passengers e-ticketed on the eleventh-largest airline in the world, arriving at the UPS air terminal to be screened and scanned and sorted and to ride up escalators and on horizontal belts toward heavy aircraft nosed up to gates.



UPS once leased old gas stations, furnished them with sawhorses under four-by-eight plywood sheets, and used the old gas stations as centers for sorting packages. Now they have the Worldport, as they call it—a sorting facility that requires four million square feet of floor space and is under one roof. Its location is more than near the Louisville International Airport; it is between the airport's parallel runways on five hundred and fifty acres that are owned not by the county, state, or city but by UPS. The hub is half a mile south of the passenger terminal, which it dwarfs. If you were to walk all the way around the hub's exterior, along the white walls, you would hike five miles. You would walk under the noses of 727s, 747s, 757s, 767s, DC-8s, MD-11s, A-300s—the fleet of heavies that UPS refers to as "browntails." Basically, the hub is a large rectangle with three long concourses slanting out from one side to dock airplanes. The walls are white because there is no practical way to air-condition so much cavernous space. The hub sorts about a million packages a day, for the most part between 11 P.M. and 4 A.M. Your living lobster, checked in, goes off on a wild uphill and downhill looping circuitous ride and in eight or ten minutes comes out at the right plane. It has travelled at least two miles inside the hub. The building is about seventy-five feet high, and essentially windowless. Its vast interior spaces are supported by forests of columns. It could bring to mind, among other things, the seemingly endless interior colonnades of the Great Mosque of Córdoba, but the Great Mosque of UPS is fifteen times the size of the Great Mosque of Córdoba.

Most packages enter the hub and

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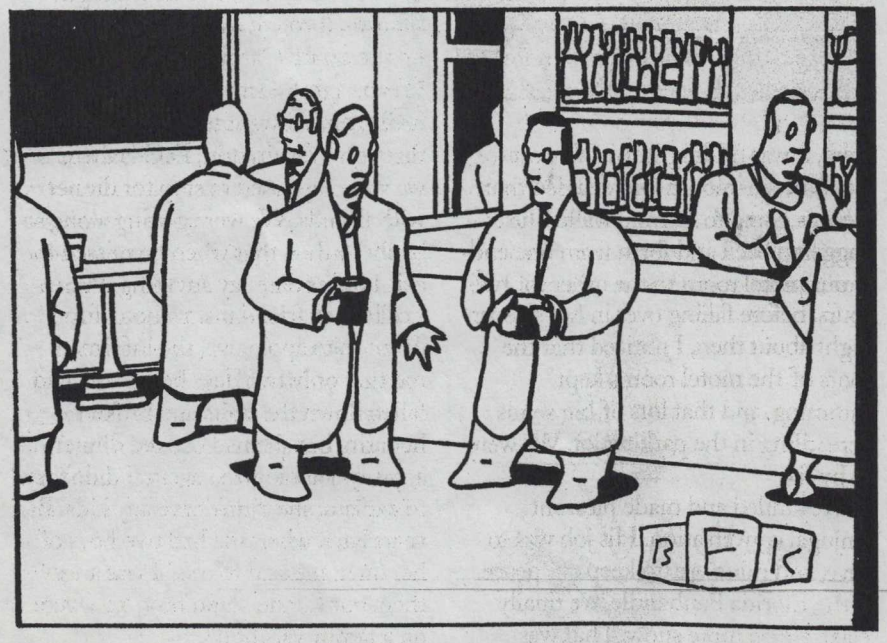
leave the hub in "cans"—aluminum containers in quarter-moon and half-moon shapes that fit the cylindroid interiors of the aircraft. The cans look something like domal tents, and in size could serve as back-yard gazebos. A can can hold well over a ton of lobsters, the bulk of the Styrofoam boxes notwithstanding. If a can loaded with ordinary packages weighs as much as two tons, one UPS worker can easily move it. The concourse floors are variously embedded with ball bearings and inverted caster wheels, causing a can to move lightly and a pedestrian to proceed at risk.

If no problem develops along the way, a standard six-sided package going through the hub will be touched twice by human beings: as it is unloaded on entry and as it is loaded into a can after its trip through what the UPS workers universally call "the sort." Some five thousand workers come nightly to the sort, but few of them ever touch a package, which is largely what the hub is about, as it carries automation off the scale of comprehension. After a package comes out of a can and is about to zing around in belts and chutes and into on-ramps and down straightaways as fast as an athlete can run, the first of the two handlers—package under eyeball—applies the live human factor, making a couple of crucial but not irreversible decisions: the package is to be placed on the correct choice among three adjacent belts, and the package is to go off on its ride label side up. Sortation used to require a more complex application of human thought, but in the development of the UPS air hub the intellectual role of the workers "out in the sort" underwent a process of "de-skilling." "When they made the hub, they de-skilled a lot of positions," a UPS manager explained to me. "Label side up. That's pretty much the extent of the training for these folks."

Those three initial conveyors are for six-sided packages, for "irregs" (parcels of irregular dimension, like automotive exhaust pipes), and for "smalls" (anything really modest in size but mainly the overnight and two-day-air envelopes with which UPS and the United States Postal Service try to nip the heels of FedEx). Triaged, the packets and packages ride up the concourse and into the core—the rectangular space with a footprint of twenty-eight acres where a package picks up speed as it moves from one to another set of east-west and north-south loops and is pushed, shoved, stopped, started, carried, routed, rerouted, diverted, guided, and conducted to belts that lead to belts that relate not only to the region, state, county, community, and neighborhood it is going to but also, in some crowded cities, to the street and block. A hundred and twenty-two miles of belts and monorails accomplish this in what is actually a more orderly manner than the rolled chicken wire that—as you gaze up into it—its compression suggests. You see packages in every direction moving on a dozen levels and two principal floors, which are perforated by spaces that allow the belts to climb to all levels and descend ultimately to the level of the airplanes. Over all, this labyrinth, which outthinks the people who employ it, is something like the interior of the computers that run it. Like printed circuitry, seven great loops, each a thousand feet around, are superposed at right angles above other loops. A fly fisherman would admire the proportions of these loops, which are like perfect casts, the two sides close and parallel, the turns at the ends tight. Unending sequences of letters and small packages zip around these loops, while the larger packages follow one another on the belts, each package tailgating the one in front of it but electronically forbidden to touch it. When a collision seems imminent where belts converge, the guilty package stops dead in its tracks and awaits its turn to move on. Collectively, the loops are like the circuits in the motherboards among the interface cards of a central processing unit wherein whole packages seeking specific airplanes are ones and zeroes moving through the chips.

Somewhere around each primary loop is one of three hundred and sixty-four positions where a given parcel will suddenly depart for another loop where there are three hundred and sixty-four additional positions at one of which the package will continue its quest to school up with like-minded packages. The first set of loops runs east and west, the second set north and south, and so on. It doesn't take a black-hole mathematician to see that the range of choice is not as wide as the universe but is getting there. If for some reason an exit position is not ready to accommodate an arriving small package, the package remains on the loop to make another circuit and another try. Under the most complex of circumstances, a package could travel several miles inside the hub before it boards a plane.

The core of the hub is not an infinite indoor space, of course. It is only a scant half-mile long, but it seems infinite because if you are in the vastness of the sort you can see only a short distance in any direction, including up. I was never left alone there, but if you were left alone



"I woke up in a strange marriage with my clothing off."

there you would need a compass no less than you would if you were dropped into the forests of Gabon between Makokou and Mékambo. You make your way forward through the dense stands of columns—columns three inches square supporting conveyors, columns sixteen inches square rising to the roof—and you look up through grids and grates and through more grids and grates laced roundabout with six-sided boxes in skeins like fast-moving scarabs. There is also a density of sound—blowers, conveyors, the hum of big cicadas—and you pass illuminated signs, not all of which you find illuminating: "Primary 1—West Induct, Area C"; "Sort Exception Area—1"; "Employee-Retention Committee"; "Tornado Shelter Area." The hub is still waiting for its first tornado. In two decades, the airport has been shut down only twice—by a foot and a half of snow in 1994 and on September 11, 2001. Some belts are color-coded—red belts for smalls, black belts for irregulars, orange belts for six-sided parcels—not that the color especially matters, since the packages know where they are going. The smalls, irregs, and six-sides each go into their own circuits. When a six-sided package reaches the position where it is meant to leave a belt, it is shoved off by chunks of thick black rubber known as "hockey pucks." The pucks at rest line the sides of belts and know in advance the length and weight of a package they are going to shove, so that a sufficient number of pucks slide out to do the shoving. Three hockey pucks slide out to shove a box of lobsters off a belt and down a chute.

UPS carries money in bags in the bellies of planes: Brink's money, Fort Knox gold, coins from casinos. Irregulars in the sort ride around in low-sided flatcars on monorails, roller-coastering from level to level. When an irreg in a cannister like a fire hydrant happened by, I asked what it was. Bull semen was the answer—on its way from Nebraska to Montana via Kentucky.

When the smalls come into the smalls loops, de-skilled workers place each envelope or small package label side up on a tray that is scarcely eighteen inches long. On the loop, the trays are lined up two abreast, and if you climb a couple of ladders to look down on them from an open-grated observation platform, you see the two rows of tilt trays, as they are called, swiftly circling the long carrousel loaded mainly with one-day or two-day letters. Completely surrounding the smalls loop at the bottom of a sloping apron of smooth wood are heavy canvas bags with open mouths. As a tray approaches the bag for which its letter is intended—a bag, say, that will be flying toward Oahu within the hour—the tray tilts to the outside, spilling the envelope onto the wooden slope. The weight of the envelope and speed of the loop and distance to the bag and friction on the wood all having been calculated as if by a Norden bombsight, the envelope slides forward and down, and drops into the bag, missing by a matter of inches the Tallahassee bag on one side and the Green Bay bag on the other. When a bag fills up, a worker closes and replaces it, and if an envelope comes along on its way to that bag it stays on the loop for another circuit. Dan McMackin, of UPS headquarters in Atlanta, once told me that people in the World Trade Center used to send UPS Next Day Air envelopes to people on other floors in the World Trade Center, because the packets would get there sooner than they would in the house mail. UPS is not so automated that it would send an overnight letter to Louisville and back to the sending Zip Code, let alone the same building. Next Day Air does not always require an airplane. A lot of Next Day Air parcels travel by tractor-trailer. UPS would send them by brown submarine if that was the better way to go.

Travis Spalding, whose office is elsewhere in Louisville, was the UPS supervisor who went everywhere with me and was the sesame of UPS security. For all that, he could lose his way in the jungles of the hub just about as readily as I could, and the two of us often had to ask directions. In a couple of million square feet of automation, a human voice giving directions is not easy to find, and we bushwhacked a good deal before coming upon someone like Jeff Savage, a manager of the small sort. After a crystal explanation that preprimaries decide which of three primaries are to follow them, preceding an advance to a Posisorter, which sets up the pucks and diverts packages to belts, he walked with us a considerable distance as if among the hedges of a maze and eventually came to a mezzanine edge where you could see far down and far up through a cavernous vista of the core of the hub. This was the Grand Canyon of UPS. On each of ten or fifteen levels, packages were moving in four compass directions at the rate of one mile in two and a half minutes on a representative sampling of the seventeen thousand high-speed conveyor belts. Pucks were pushing packages to the left, to the right, including lobsters that raced into cylindrical spaces and whirled in semicircles as if they were on an invertigo ride with an "aggressive thrill factor," in the language of amusement parks. In no other place could you absorb in one gaze the vast and laminated space where, in the language of UPS, "automated sortation takes place." Travis Spalding said, "The technology is not new, but nowhere else in the world is it used on this scale, including Memphis."

Over recent years, FedEx, of Memphis, has been chasing UPS in ground transportation of packages with about the same intensity that UPS has displayed in competing with FedEx in overnight deliveries. FedEx is the world's seventh-largest airline. As the rivalry ages, the one comes ever more to resemble the other, like *Time* and *Newsweek*, which often seem to have the same cover, and sometimes do. The root criterion impelling UPS and FedEx appears to be that a healthy business grows, expands, and must go on indefinitely expanding, or it dies. The economist Kenneth Boulding once said, "Anyone who believes that exponential growth can go on forever in a finite world is either a madman or an economist." Nature's model for this paradox is *Homarus americanus*, the American lobster, which, almost indefinitely, expands and molts, expands and molts, growing an ever larger shell until it ends up on a bed of bamboo leaves in Japan.

If you own a Toshiba laptop and something jams, crashes, or even goes mildly awry, you call 1-800-TOSHIBA and describe your problem. If the answerer can't help you, a brown package car shows up at your door with an empty padded box hollowed out in the shape of your laptop. UPS takes your computer overnight to Louisville, and keeps it there. Two miles south of the runways are six more UPS buildings, white

and windowless in a spotless and silent landscaped campus, and covering, on average, more than three hundred thousand square feet. Your laptop goes in there—Building 6. Within a few hours—in a temperature-controlled, humidity-controlled, electrostatic-sensitive area—an electronic-repair technician who is a full-time UPS employee will have the innards of your Toshiba laptop spread all over a table. Computers, laid open, can be devastated by static electricity. There are eighty technicians. You visit them in gowns and slippers. They replace hard drives, main-system boards, liquid-crystal displays. In the process, they remove viruses as if they were whisking lint. In a day or two, your laptop takes a ride through the sort and flies in a browntail back to you.

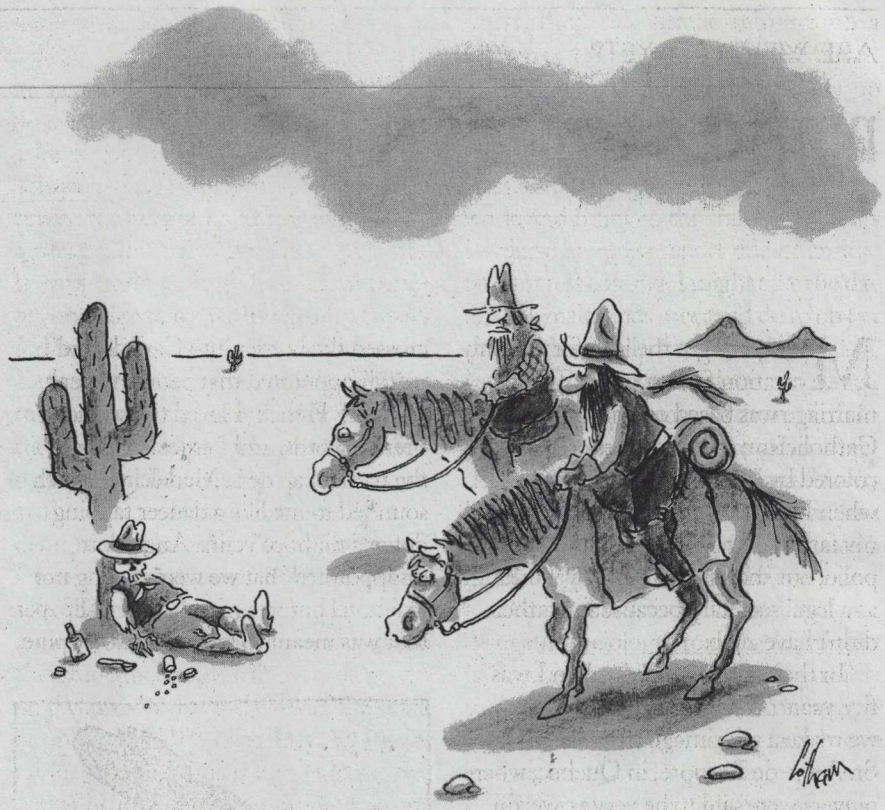
UPS became interested in this kind of thing a few years ago when the company realized, as was explained to me, that it had "maxed out in the package-delivery trade and now needed to expand." Toshiba evidently could not care less whether customers know or do not know that UPS repairs its laptops. To UPS, Toshiba has also outsourced its buyer remorse. After new computers are returned to retail stores for credit—downloaded with who could guess what—the computers are gathered up by UPS and detailed in Louisville, flushed out and in every sense cleaned. With ninety-day warranties, the computers go back into the sales stream. In Building 6, NPR stands for New Product Return.

In Elizabethtown, Kentucky, half an hour down the interstate, is a seventh secluded warehouse—four hundred thousand square feet—where UPS shelves a variety of products including every last component of Bentley motor cars. Queen Elizabeth arrives at Balmoral in her Bentley. You can go to the Bronx in your Bentley for a hundred and sixty-five thousand dollars, the current cost of a Continental GT. There are more Bentleys in the United States than in England. In Zionsville, Indiana, is a Bentley dealership whose Web site tells you that it has the largest inventory of Bentley parts in North America. People in places like New York and Montana will truck their Bentleys to Zionsville for repairs. When they do, Zionsville relies upon UPS in Elizabethtown for parts. The Bentley factory in England has called Elizabethtown for parts. Carl Norris, three years out of Western Kentucky University, is an operations supervisor there. Leading Travis Spalding and me through the client zones of the vast UPS depot, he walked into a fifteen-thousand-square-foot space where bins and racking systems held everything from nuts, bolts, and gaskets to entire engines ready to fit into cars like bread into toasters. "This is the Bentley account," he said. "These engines are rated at two hundred miles per hour. They'll bust two hundred." Norris introduced us to Michael Mountain, locally known as Mr. Bentley, a well-built African-American who looked as if he also could bust two hundred. Michael Mountain took us through windscreens, wheels, and exhausts—irregs wrapped and ready for the hub—and on to transmissions, which were packed in wooden chests that would not have seemed unusual to Long John Silver. If your Bentley breaks down in the Steptoe Valley of Nevada, you may be there for the night but a brown vehicle will soon show up with parts. "The GT can have a refrigerator in the boot," Mountain told us. "And this is a pollen filter." Pollen filter? "Yes—so your allergies don't act up while James is driving you around town."

UPS calls this relatively new part of its business UPS Supply Chain Solutions. Bentley is among the oldest S.C.S. accounts. Another is Rolls-Royce, whose packaged V-22 Osprey engines were also sitting on the Elizabethtown floor. When a start-up shoe company was growing so rapidly that its trucks had nowhere to unload, UPS Supply Chain Solutions became the shoe company's principal warehouse. Not every client is as open about the relationship as are Bentley, Toshiba, and Rolls-Royce. Large areas of all seven warehouse floors are off limits to visitors, reserved for companies who would prefer that their products not turn brown en route. They have nondisclosure contracts. These include not a few of the household names in American commerce. They want you to think it all comes straight from them. Famous cameras from the Orient arrive in Louisville in bulk-shipment crates. UPS has the retail boxes waiting, and fills them with the famous cameras. UPS repairs certain printers. They refurbish certain cell phones.

One afternoon last year, I bought a printer through Amazon.com and, being me, clicked the box for free shipping—promised to be at your door within two weeks. The printer actually arrived before ten the next morning. I was puzzled speechless at the time but have since come to know that my e-commerce order caromed from Amazon to UPS, and quite soon the printer was rolling from a UPS warehouse to the hub. When I told this story to Howard Strauss, a digital savant who worked for NASA on the Apollo program and is now at Princeton University, Howard said, "In my business, people are always saying it's easier to move bits than atoms. Bits move at the speed of light. Atoms move at the speed of a 747, if you're lucky." My transaction travelled both ways, and a good deal faster by binary digit.

The Elizabethtown warehouse owes its existence to the dot-com orogeny, when UPS Air swelled into the e-commerce trade. When the bubble burst, some dot-com clients abruptly vanished—here today, gone forever—and UPS did not even know where to send the leftover goods. One that stayed solid was Jockey. In nine thousand boxes in six rows of bins—each row two hundred feet long and organized by something like the Dewey decimal system—UPS keeps Jockey panties and Jockey shorts and Jockey bras and Jockey shirts and Jockey nightgowns and Jockey socks in the warehouse in Elizabethtown. Jockey is in Kenosha, Wisconsin, but this is the nexus of Jockey.com, and when you order your next pair of briefs UPS will find them on a shelf in Kentucky, wrap them, and send them through the sort. Carl Norris said, "A company that is concentrating on marketing and sales doesn't have a lot of time to worry about distribution problems. That's where we come in. We become a partner with the companies. We run these businesses like they're our own."



"It's a great country—just don't get sick."

We moved out of Jockey space and into thirty-seven thousand square feet of veterinary cat and dog food, fuel for the Royal Canin company's "Innovative Veterinary Diets"—to be found only at clinics and never at Wal-Mart. If your cat has a sensitive stomach, use Hi Factor Formula, said instructions on the palleted bags and cans. Eating Royal Canin, your pet will, on average, live a little longer, but you have to buy the product throughout the life of the dog. Or cat. There was venison-and-potato dog food, vegetarian dog food, potato-and-whitefish dog food, and green-peas-and-rabbit formula for the "nutritional management of gastrointestinal disorders" in cats. There were foods for feline urinary syndromes, foods for feline inflammatory bowels. Lending credence to Royal Canin, its allotted space at UPS smelled like a vet's office.

While Jockey came to the hub from Wisconsin and Clearwater from Nova Scotia, Hillerich & Bradsby was already there. By the front door of 800 West Main Street in Louisville, close to the Ohio River, is a baseball bat that weighs sixty-eight thousand pounds. This is Hillerich & Bradsby's company sign—the ne plus ultra Louisville Slugger—and for Hillerich & Bradsby UPS Air is the premier supply-chain solution. Suppose Derek Jeter runs low on bats and sends an anxious message to Louisville. At 800 West Main, a big ash dowel goes into a machine that was made in Italy and is programmed for Jeter's personal slugger—a thirty-two-ounce, thirty-four-inch P72 with a regular knob, a twenty-nine-thirty-seconds-inch handle, and a two-and-eleven-thirty-seconds-inch barrel. In sixty seconds, starting at one end, a bat emerges from the dowel. It is dipped in lacquer for a Smith finish, which is black. A Smith finish is also sateen, like dancing pumps. Eleven more dowels go through the same procedure, and then a six-sided package is off to the sort and into a plane that is aimed at the New York Yankees, wherever they might be. On the Friday when Fred McGriff, chilling out in Durham, was called up by Tampa Bay, he needed new bats he had ordered, and a package of twelve was sent UPS overnight and delivered in Florida in time for Saturday's game.

About two-thirds of major-league players use Louisville Sluggers. When they need bats badly, they call Charlotte Jones, of the Pro Bat Department. Other employees travel around among the teams while Jones spends her days taking orders on the phone. Ken Griffey, Jr., calls her Mom, as do a great many major-league players. She routinely asks them if there are adjustments they would like to make in their existing profiles. Would you like to try a flared knob this time? Would you like your bats cupped? A cupped bat has been scooped out at the fat end to lighten the swing. Usually, a player's interest in adjustments is in inverse ratio to his batting average. In considering new dimensions and characteristics, he has more than six thousand choices. The ballplayers call Mom up from everywhere and they don't always get through. "Bret Boone," she says, "if he's not getting the pop out of his bats, he's likely to pick up his phone at all hours of the night." Her published number is 1-888-444-2287, and her home telephone is unlisted. Players say to her, "I want that special number." They don't get it. Mom is actually a grandmother. Her phone is upstairs and she sleeps downstairs. She likes to quote Yogi Berra, who said, "There can't be anything wrong with me—it has to be the bat." If players pay for their own bats (ash, forty-two dollars; maple, fifty-five), they can sell broken ones to fans and get a fourfold return on their investment. If the ball club pays for the bats, the ball club sells the broken bats. After a century and a quarter, there is something left in baseball of the grubbing, gloveless era. When Ken Griffey, Jr., was nearing his five-hundredth home run, he called Jones often to buy more bats. Jones describes Griffey as "one of the best salesmen for Louisville Slugger," and says that in his profile preferences he is unusually consistent, faithful to his Jose Cardenal model C271C with a double dip of lacquer. The second dip makes the wood harder. Griffey, she says, quoting him, is not easy to reach, either, accepting phone calls in the clubhouse only from his wife, his parents, and "that woman from Louisville Slugger." At Hillerich & Bradsby, a unit is a six-sided package of two, four, six, or twelve bats. A major-league player goes through a hundred bats a year, and two hundred

units a day go in brown package cars from West Main Street to the hub. On UPS invoices Hillerich & Bradsby in Louisville spends as much as thirty thousand dollars a week.

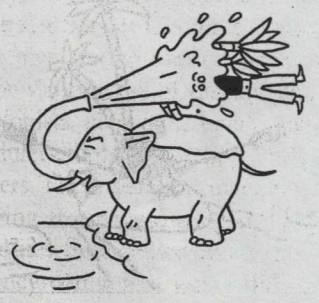
If you walk from New Jersey to California, you can replace your socks by Next Day Air, as at least one man has already done. Aged sixty-nine when he started, he wore bar-coded T-shirts. On his arrival at each successive city, UPS scanned him, ready to call 911. His itinerary grew in the computerized tracking system, which starts ordinarily with a UPS driver's DIAD (die-add), the cumbersome "delivery information acquisition device" that looks like a safe-deposit box in the driver's hand and not only records pickups and deliveries but also initiates tracking labels. On the walker's seventieth birthday, he was still walking. UPS delivered the cake.

A package going through Louisville is scanned as many as six times in the hub alone. When you see a bright-red beam crossing a box, that was an infrared image sensor. The label is read, the weight and the dimensions are registered. The label is digitally photographed. If something is wrong, as is not infrequently the case, the system calls the package an "exception." Labels may be illegibly handwritten. Reused boxes may have two or more labels. Footlocker boxes are reused so much that somebody's homemade cookies may want to go to three cities. A Zip Code may have a slipped digit or may simply not be there.

In the Telecode Office, a large room at the edge of the core, rows of telecoders bend toward computer monitors and study bad labels in digital imagery. Telecoders have twenty to thirty seconds to rectify the labels in an electronic way, which, usually, they are able to do, tapping at their keyboards. If they fail, nothing jams the loops, because the offending packages are swept away to exceptions. Down in a "sort exception area," a new label comes out of a machine and is stuck on the package by another human hand.

A large percentage of the people at the computers appear to be college students, and that is what they are. While automation has de-skilled the sort from the human point of view, shrinking the population around the belts, it is at the same time burning the midnight oil of college students in order to overcome its blemishes. Automation alone will not do everything for eight million packages a week, and UPS is so needful of reliable part-time employees that it has embraced the field of education as if it were a private university. It recruits students. It pays tuitions. It gives medical benefits and assistance with housing. It pays for books. It gives bonuses for passed courses. It adds fourteen hundred dollars to a baccalaureate degree. UPS is both the founder and the endowment of Metropolitan College, which has classrooms at the hub and also outsources its students to the University of Louisville, Jefferson Community College, and Jefferson Technical College. One semester at a time, the college signs contracts with the students, committing them to attend classes by day and work in the small hours for the UPS Next Day Air Operation. Whether this is an academic bonanza or indentured servitude is in the eye of the scholar.

More students go to Metropolitan College than to Haverford. I met many of them at the hub and talked at length with three. Jamie Kjelsen (silent "j"), one of the telecoders, was a striking young woman with long dark hair, bright brown eyes, and mother-of-pearl polish on her nails. She had been a high-school senior in Brandenburg, Kentucky, five years before, when some "Metro reps" came to the school and set up a table. During a lunch break, she signed a card, expressing an interest in Metro that reflected concern for her family ("My parents are middle class and would have a hard time paying for my school"). She had started with UPS as a diverter clerk on a conveyor in the old hub, and when the new hub was finished, in the fall of 2002, she went into the Telecode Office ("That's where we sort unsmart packages"). Her nightly routine, she said, was to telecode from eleven-something until about three-thirty, then ride fifteen minutes on a UPS shuttle to her car, then drive home. Asleep by five-thirty, she would get up around noon if she had a class at one. When did she study? "After work, after class, during fifteen-minute breaks at work, and riding in the shuttle. If there's a twenty-six-page report due or an important test coming, I might take the day off." To make ends meet and do so on her own without help from her parents, she had a second job—Fridays and Saturdays at Champs Sports in the mall. Taking the second job had forced her to reduce her number of courses and thereby lengthen her education ("If you go part time, it takes twice as long to graduate"). After five years in college, she was a junior. Aiming toward a bachelor-of-science degree in sociology from the University of Louisville, she would finish possibly in three more years—"when I'm twenty-six," she said, in a tone that faded with resignation. Could I have her e-mail address? "Sure—oceanrollie@hotmail.com."



Amos Hammock was working in the shift, an air-operations term that refers not to hours but to the job of shifting cans. Big, beefy, brush-cut and tackle-shaped, he was among those who, with one hand, could haul a two-ton can over the casters and ball bearings to a waiting airplane, making sure that the can stopped rolling beside the correct airplane. After a year on an outbound belt, he had risen to the shift, and was now managing the efforts of nineteen others. Around his neck was a blue-and-white woven lanyard that said "PIKEVILLE HIGH SCHOOL 2001." Pikeville, on the Appalachian Plateau, is in eastern Kentucky, nearly two hundred miles from Louisville. Amos heard about Metro College on a radio commercial. He went to Hazard, Kentucky, to meet a Metropolitan College recruiter. He signed for "a hire-on bonus" of twenty-four hundred dollars, and a hundred dollars a month against rent—in addition, of course, to wages (eight dollars and fifty cents an hour). "You get paid," he said to me. "And they pay for your school. People would be about stupid not to take the chance." Now he was on the verge of an associate's degree in applied science from Jefferson Tech and, with diploma in hand, would be hoping for a job as an industrial mechanic.

Metropolitan College guides its stu-

dents even while they are working in the dead of night. "College mentors are going around in the hub all the time," Amos told me, referring to college officers who are, all in one person, deans, course advisers, directors of studies, financial-aid representatives, counsellors, and confidants. At Oxford, they would be called moral tutors. They can also be fellow-students, like Betsy Curtis—an eighteen-year veteran of UPS who had left the sort to raise children but decided to return to it specifically "to take advantage of Metro College." Separated from her husband, she had gone back to the hub and back to college in 1999, when her third child was in a preschool program. And now she was a Metro College mentor in the small-sort area, arriving for work at 10 P.M., moving from one to another of the hundred and fifty students in her charge, occasionally getting hit by a package that missed a bag, and with firsthand understanding of a job that computerization had made "simpler but more tedious." She said, "The loan is the only thing that relates to staying time—four years for eight thousand dollars." One night a week, she would sit in a break area, backlit by the food and beverage machines, telling students about loan programs, retro reimbursements, and milestone bonuses (thirty hours, six hundred dollars). And she was very much one of them in the sense that in the daytime she was taking classes, too—on the University of Louisville's main campus, past Churchill Downs, a couple of miles toward the river from the hub. "By the end of the week, I'm so tired I can't hardly . . . I don't get very much sleep at all," she said. "But I want to finish without owing a ton of money. I leave the sort between two and two-thirty." Driving south toward home around three—tapping her cheeks, the "windows open for air"—she has nodded momentarily at the wheel.

Only twenty minutes from the hub, Betsy lives in rural, rolling country, where the crops are tobacco, sorghum, alfalfa, and churches. Asleep by three-thirty, she is up at six-forty-five to take her sons to school, and soon she is off to the university and her logic class. For exercise, she walks up to four miles a day on the university track, then goes home to do housework and yardwork and (often) cut grass. She has two pastures and two horses and forty acres with a lot of grass. She "gets along on five hours' sleep" because "there's always something to do with the house, yard, and children through the afternoon and evening before going to work," doing her best, all the while, "not to be grouchy." Friday into Saturday, she has stayed asleep nineteen hours "playing catch-up—sometimes it catches up with me." She sings in her church choir and appears in the Christmas pageant. She goes to her son's basketball games. When her daughter, Jasamine, class of 2003, was on the North Bullitt High School dance team, Betsy would take a pillow and sleep in her car outside the school, asking to be awakened for Jasamine's performance. Jasamine would come out and wake her up. Some of Jasamine's friends from those days now work in the small sort and have come to understand why Betsy was so often sleeping. Of all workers in the hub, many are single parents, seventy per cent are female, and the median age is thirty-four.

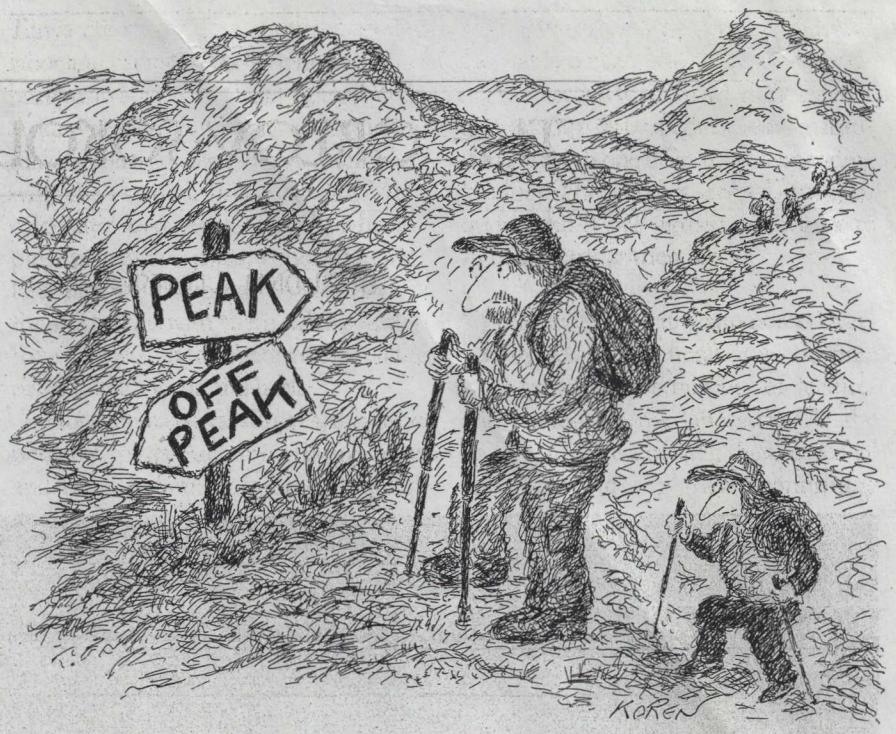
Of her husband, Betsy says, "He is going through second puberty." She is blond, with a smiling and trusting face and mother-of-pearl polish on her nails. When I met her, last spring, her sons were in the third and tenth grades, and Jasamine, a first-year student at the University of Louisville, had a twenty-month-old daughter named Hailey. Six months earlier, the baby's father had been hit hard by a drunk driver on Mud Lane near the Blue Lick Airport. Twenty-four years old, he was injured internally and underwent a hip replacement. After class, Betsy would stay with him until she went to work; then his mother would take over. With help from her own mother, Betsy also looked after the baby until spring. Now she had ten classes to go to gain her baccalaureate in marketing, and intended to follow that with a master's in secondary education. She hoped to teach high-school business classes in Bullitt County someday. So, to make it all possible, she said, "I'm out in the sort."

In a sequestered end of the core of the hub, an eight-foot chain-link fence, opaqued by blue plastic strips, surrounds an area reserved for United States Customs. If you get up close and peer through a break in the plastic, you see X-ray machines. You see packages with characters on them, packages with Spanish words on them. You see inspectors wearing badges and firearms. You do not see dogs but they can smell you. As packages stream through the sort, Customs can query out anything it wants to. Tracking the tracking, it studies the software with software.

On one of my first approaches to the hub, through a guarded peripheral gate, a package of Fruit Breezers in my pocket set off a screech from a metal-detecting wand. I had already been asked for my tape recorder, returnable on departure. A terrorist who decides to send himself somewhere by UPS Air might have difficulty getting off the ground, let alone through the hub. Among the many moats and screens set up by the company in recent years is this one: "Dear UPS Air Cargo Customer: Individual pieces that weigh 150 lbs. or more, and which are large enough to contain a human being must be tendered stretch or shrink-wrapped and/or banded to be considered ready for carriage." In other words, Harry Houdini could send himself Next Day Air. Others need not apply. A human irregular might make it through the sort, but only mummies qualify.

Not much gets near the browntails, so it was faintly giddy to be cleared one day in a car driven by Travis Spalding and to be far out by a taxiway as an A-300 landed. Brown and white, shaped like a very large guppy, it could have crammed in some three hundred passengers and instead was carrying ten thousand boxes arranged about as tightly. Slowly we followed it into a bay past the high brown fins of other planes, until it docked at B-09, smelling like a camp lantern. About a hundred UPS planes touch down in Louisville on an average evening. During the Christmas season, one lands every ninety seconds. Two of the

planes we went by had been previously owned. You could see the filled-in windows where passengers had once looked out. Most were bought new and seamless—especially the 757s, and 767s. Two pilots soon descended from the A-300 and got into a van that would take them to their lounge at the hub's Air Service Center. Their deplaning passengers may have been just boxes, but the pilots were dressed to a standard at least as crisp as Delta's or United's: filigreed gold on their brown hats, gold-striped brown epaulets on their white short-sleeved shirts, brown striped ties, brown trousers, shining brown shoes. UPS brown was borrowed long ago from the brown of Pullman railroad cars, and, with Pullman long gone, UPS has trademarked the color. When sculptures of racehorses appeared recently on sidewalks all over Louisville (a semi-permanent civic promotion), UPS erected a brown Pegasus outside the hub—a winged horse with a brown saddlecloth, ridden by a jockey in brown silks. UPS vernacular is all but trademarked as well. A package car is never a truck, because the company wishes to distance itself from the scruffy connotations of the term "truck driver," never mind that UPS drivers are all Teamsters. By corporate fiat, the very initials of the company's logo stand for nothing anymore. Officially, they carry no meaning, unless you happen to know that they once stood for United Parcel Service.



The pilots' lounge at two and three in the morning is a sea of brown-and-gold epaulets, vans idling outside, pilot bags piled high beside the curb where pilots go out to smoke. The talk at the tables is of "seven fours," "seven fives"—747s, 757s—and of approaching "pull times," when blocks are pulled away from wheels and airplanes depart. A faint whiff of hauteur is in the ready room—like the ambience of surgeons in a cafeteria. Essence of pilot is even stronger than essence of UPS—an impression, it should be said, that seems to derive almost wholly from the male pilots.

Worldwide, the airline has about twenty-five hundred pilots. Many come from the military. To be employed by UPS, they need as many hours as they would need to be employed by Delta or United. Not by chance, the percentage of UPS pilots who are women is higher than the industry average. I spoke with Stacey Bie one day as she was waiting for a van. She told me that she had been a military pilot ten years back, and then had started with UPS as a junior second officer. She was now a senior first officer, the rung below captain. An Ohioan educated at the University of Texas, she was aviator trim, and uncommonly attractive, with alert eyes and dark-brown hair. She said matter-of-factly that she would like to be a captain, yes, she would like to do it; after all, that was the goal everyone had at the start. Captain was where the seniority arrow pointed. On the other hand, a new captain among captains draws the less desirable routes and the less desirable hours. As she put it, "Junior captains work all night, and get the worst of nighttime flying." Also, being a captain would reduce her time with her husband and her two children, in Cincinnati. She said goodbye, and went off to fly her 757.

Beyond the pilots' quarters, the rest of the Air Service Center is also an all-night hive, its tight spaces as crowded as a newsroom, full of dispatchers, meteorologists, crew schedulers, crew reschedulers, flight dispatchers, and global trackers. There were contingency people studying storms and choosing alternative routes. Surrounded by a ring of contingency computers was a dull plastic cylinder that closely resembled a dome light from the roof of a police car. Action would erupt if it were to light up red. It lights up red when a UPS airplane anywhere in the world cannot take off for mechanical reasons or cannot function for any reason. After the light goes on, a standby crew gets into a standby airplane and flies off to fill the gap. Every night around the network, UPS has something like thirteen airplanes and thirty-two crewmen ready but unassigned. They sit and wait for trouble to arise, like pilots in the Swiss Air Force, whose planes are hidden inside Alps, always ready to emerge, in times of need, through camouflaged doors in the sides of the mountains. The UPS term for this is "hot spares." In Louisville or elsewhere, the light lights up, a siren goes off, and a loudspeaker says, "Activate the hot spare!" Hot-spare crews report to work each evening and go out to the ramp to pre-trip their plane. Then they wait. They arrive at seven and go home at three in the morning. If they are triggered by a call to "replace a mechanical" or "rescue that volume!," they have thirty minutes to get their plane off the ground. When the hot-spare light is red, mechanicals are the most common cause. In all its years of flying, UPS has never lost an airplane. ♦